

Notice of Allowability

Application No.

10/810,726

Examiner

Sherry L. Estremsky

Applicant(s)

ABE ET AL.

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed March 29, 2004.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Allowable Subject Matter

2. Claims 1-4 are allowed.
3. The following is an examiner's statement of reasons for allowance:

No reference nor combination of references was found which teaches a hydraulic transmission apparatus with a lockup clutch including a pump impeller, a turbine runner, a clutch piston dividing a clutch chamber into inner and outer fluid chambers, and a lockup control unit for generating a pressure difference between the inner and outer fluid chambers to move the piston using a pump driven by an engine, wherein a resilient member is disposed between the clutch piston and turbine runner for biasing the clutch piston in a forward direction, a backward movement stopping unit restricts a predetermined backward position of the clutch piston to put a frictional engagement unit in a cut-off state, and the clutch piston is held at the predetermined backward position when the engine is in an idle state.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent 3,422,940 (Maurice) January 1969 - discloses a torque converter lockup clutch that is fluid applied and fluid released, with a Belleville spring biasing the clutch piston toward an engaged position.

U. S. Patent 4,516,671 (Nishikawa et al.) May 1985 - discloses a device which disengages a torque converter lockup clutch when the throttle opening of the engine is below a predetermined low degree.

U. S. Patent 4,693,347 (Nishikawa et al.) September 1987 - addresses the issue of needing to ensure the disengagement of the torque converter lockup clutch during engine idle.

U. S. Patent 4,876,922 (Koshimo) October 1989 - when an engine idles, pressure differences in the inner and outer fluid chambers maintain the torque converter lockup clutch in a disengaged condition.

U. S. Patent 5,651,752 (Wakahara et al.) July 1997 - appears to show a resilient member disposed between a turbine runner and clutch piston of a torque converter lockup clutch.

U. S. Patent 5,802,490 (Droste) September 1998 - when an engine speed is at idle speed or a lower speed than 2000 rpm, fluid pressure is applied between an impeller cover and the friction surface of a lockup clutch to disengage the clutch and open the torque converter.

U. S. Patent Application Publication 2004/0251104 (Abe et al.) December 2004 - discloses applicant's torque converter lockup clutch structure, including a resilient member between the clutch piston and turbine runner.

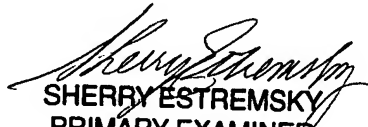
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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherry L. Estremsky whose telephone number is (571) 272-7090. The examiner can normally be reached on Tuesday and Friday from 7:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SHERRY ESTREMSKY
PRIMARY EXAMINER
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